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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,353	09/14/2005	Richard Gapes	BALD 0101 PCT	3926

27256 7590 09/27/2006

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EXAMINER

PARSA, JAFAR F

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/525,353

Applicant(s)

GAPES ET AL.

Examiner

Jafar Parsa

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/23/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following headings are required for a utility application under 37 CFR

1.77(b)

- a) title of the invention,
- b) cross-reference to related application,
- c) background of the invention,
- d) summary of the invention,
- g) brief description of drawings, and
- h) **detailed description of the drawings.**

Detailed description of drawings are required.

Appropriate corrections are required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 6-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ergun et al (US 2002/0013486 A1).

Applicants' claimed invention relates to a method for the basic or acidic catalyzed esterification and transesterification of fatty acids, such as oils and fats by dispersion of low alcohols, especially methyl alcohol, in the liquidic initial product. The invention is characterized in that the methyl alcohol (or other low alcohols) is fully dispersed in the reaction mixture. The liquid dispersion has a globule size between 3 and 50 microns.

Ergun teaches a method for producing fatty acid methyl ester, including compounding saturated and unsaturated higher fatty substances from at least one of vegetable and animal with an alkaline solution dissolved in alcohol to form a mixture. The method also includes emulsifying the mixture to reach a chemical balance state in a reaction section, wherein fats are transesterified into fatty acid methyl ester, wherein border surfaces of the mixture are enlarged by dynamic turbulence in the reaction section and the transesterification is performed under pressure, and wherein the pressure is reduced during transesterification. See abstract.

Ergun teaches that According to a special feature of the invention, the high or powerful dynamic turbulence is produced by physical forces, for example mechanical shear forces. The advantage thereby is that the shear forces, which can certainly be created mechanically, produce much more powerful turbulence, which reduces the drop size of the liquid to be transesterified in the turbulence, and thus enlarging the border surface considerably. Since transesterification is a border surface reaction, the reaction

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rate is correspondingly increased by the enlarged surface area. See paragraph 0016 and 0067.

The examiner notes that in the background of the invention applicants stated that WO 99/26913 A1 (the same as US 2002/0013486 A), it can be recognized that a type of static mixer has been described which has nothing to do with the invention under consideration. This is also easily recognized in diagrams Figure 1 and Figure 2. It is the examiner's position that the static mixer and the turbulence flow create dispersion between fatty acids and short chain alcohol. From figure 1 and 2 it appears that globule size of the liquid droplet falls within the rang of 3 and 50 microns, which reads on the instant claimed invention. Other differences (pressure, type of equipment and etc.) that applicants recited in the background of the invention does not affect the patentability of the instant claims the way that instant claims have been drafted.

The difference between the Ergun reference and the claims invention is that the instant claims require that liquid droplets having a globule size of 3 to 50 microns. However, Ergun teaches that powerful dynamic turbulence along with the static mixer disperse the fatty acids and alcohol and reduces the drop size of the liquid to be transesterified. It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to reduce the droplet size, generally smaller droplet size will enable improved absorption and eliminate or decrease the use of surfactant, which is toxic.

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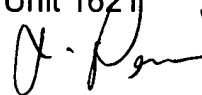
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jafar Parsa whose telephone number is (571)272-0643. The examiner can normally be reached on 8 a.m.-4:30 p.m. (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JP
September 15, 2006

Jafar Parsa
Primary Examiner
Art Unit 1621



J. PARSA
PRIMARY EXAMINER